

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An electrode structure for a gas discharge laser, comprising:
an elongated electrode body capable of functioning as one of an anode and a cathode in order to energize a gas mixture in the discharge chamber, the electrode body including a central nose portion and at least one shoulder portion extending away from the nose portion; and
[[a]] an elongated ceramic spoiler coupled with the shoulder portion of said electrode body and configured to define an arcuate region which terminates at said central nose portion in order to ~~prevent~~ reduce arcing between the shoulder portion and a component of the discharge chamber and minimize turbulence across the electrode body.
2. (original) An electrode structure according to claim 1, wherein:
the ceramic spoiler includes a tongue portion capable of being received by a channel in said electrode body in order to couple the ceramic spoiler with the electrode body.
- Claim 3. (cancelled)
4. (original) An electrode structure according to claim 1, wherein:
the nose portion of the electrode body has a length that provides for a proper discharge while limiting the effect on a flow of the gas mixture in the discharge chamber.
5. (original) An electrode structure according to claim 1, wherein:
at least a portion of the ceramic spoiler exposed to the gas mixture has a substantially smooth finish, in order to minimize turbulence in the gas mixture.

6. (original) An electrode structure according to claim 1, wherein:
at least a portion of the ceramic spoiler exposed to the gas mixture is shaped to tangentially follow a flow of gas mixture through the discharge chamber.
7. (original) An electrode structure according to claim 2, further comprising:
a mounting structure positioned in the channel of the electrode body, the mounting structure capable of flexibly holding the tongue portion of the spoiler in the channel.
8. (original) An electrode structure according to claim 7, wherein:
the mounting structure is a snap-on mounting structure including a mounting portion and at least one clip, each clip having an extending portion capable of pressing against the tongue portion of the spoiler in order to hold the tongue firmly in place relative to the channel.
9. (original) An electrode structure according to claim 7, wherein:
said mounting structure is made of a Copper-Beryllium alloy and covered by a nickel layer.
10. (original) An electrode structure according to claim 7, wherein:
the mounting structure is sufficiently flexible to allow for thermal expansion and contraction of at least one of the electrode body and ceramic spoiler.
11. (currently amended) An excimer or molecular fluorine laser system, comprising:
a resonator including therein a discharge chamber filled with a gas mixture, the discharge chamber including at least one window at an end of the discharge chamber for sealing the discharge chamber and for transmitting a laser pulse; [[and]]
a pair of elongated discharge electrodes in the discharge chamber and connected to a discharge circuit for energizing the gas mixture and generating the laser pulse, each discharge electrode including a conductive structure ~~having a first surface region~~ that is exposed to the gas mixture in order to impart electrical energy to the gas mixture and

generate the laser pulse, ~~and a second surface region having an insulating member coupled thereto in order to prevent arcing between the second surface region and a component of the discharge chamber~~
with at least one of the electrodes including an elongated channel having an internal width greater than the width of the opening to the channel;

a elongated ceramic spoiler, said spoiler including a projecting tongue, wherein at least portion of the free end of the tongue has a width larger than the width of the tongue at a point closer to the spoiler, said tongue being received in the channel of the electrode;

a spring mounted in the channel and biasing the tongue of the spoiler against the sides of the channel so that the spoiler is held in a stationary position with respect to the electrode body; and

a blower for circulating the gas mixture between the pair of discharge electrodes.

Claims 12-14. (cancelled)

15. (original) A laser system according to claim 11, further comprising:

at least one pre-ionization unit including a plurality of pre-ionization pins positioned in said discharge chamber and capable of energizing the gas mixture, and wherein the insulating member prevents arcing between the second surface region and the pre-ionization pins.

16. (original) A laser system according to claim 11, wherein:

said ~~first surface region~~ conductive structure of at least one of said electrodes includes a protruding nose portion capable of maintaining an appropriate gap distance between the pair of discharge electrodes.

Claim 17. (cancelled)

18. (currently amended) A laser system according to [[claim 17]] claim 11, further comprising:

at least two bearings for supporting said blower.

19. (original) A laser system according to claim 18, wherein:
said bearings are made of a Cronidur material.
20. (original) A laser system according to claim 18, wherein:
said bearings are made of a high nitrogen-alloyed martensitic steel.
21. (original) A laser system according to claim 18, further comprising:
a dry film lubricant for lubricating said at least two bearings supporting said
blower.
22. (original) A laser system according to claim 21, wherein:
the dry film lubricant is a modified tungsten disulfide.
23. (original) A laser system according to claim 21, wherein:
the dry film lubricant is a Dicronite lubricant.
24. (original) A laser system according to claim 18, wherein:
said at least two bearings are selected from the group consisting of ceramic ball
bearings and ceramic roller bearings.

Claims 25-36. (cancelled)

37. (new) A laser system as recited in claim 11, wherein said channel includes tapered sidewalls so that the separation between the sidewalls is narrower near the opening of the channel and wherein said tongue of the spoiler includes tapered side walls so that the width of the tongue increases outwardly from the spoiler.

38. (new) An electrode structure for a gas discharge laser, comprising:
an elongated electrode body capable of functioning as one of an anode and a
cathode in order to energize a gas mixture in the discharge chamber, the electrode body

including a shoulder portion, said shoulder including an elongated channel having an internal width greater than the width of the opening to the channel;

a elongated ceramic spoiler coupled with the shoulder portion of said electrode body, said spoiler including a projecting tongue, wherein at least portion of the free end of the tongue has a width larger than the width of the tongue at a point closer to the spoiler, said tongue being received in the channel of the electrode body; and

a spring mounted in the channel and biasing the tongue of the spoiler against the sides of the channel so that the spoiler is held in a stationary position with respect to the electrode body.

39. (new) An electrode structure according to claim 38, wherein:

the electrode body further includes a nose portion for energizing the gas mixture, the shoulder portion being positioned on either side of the nose portion.

40. (new) An electrode structure according to claim 38, wherein:

at least a portion of the ceramic spoiler exposed to the gas mixture is shaped to tangentially follow a flow of gas mixture through the discharge chamber.

41. (new) An electrode structure according to claim 38, wherein spring is made of a Copper-Beryllium alloy and covered by a nickel layer.

42. (new) An electrode structure for a gas discharge laser, comprising:

an elongated electrode body capable of functioning as one of an anode and a cathode in order to energize a gas mixture in the discharge chamber, the electrode body including a shoulder portion, said shoulder including an elongated channel having tapered sidewalls so that the separation between the sidewalls is narrower near the opening of the channel;

a elongated ceramic spoiler coupled with the shoulder portion of said electrode body, said spoiler including a projecting tongue having tapered side walls so that the width of the tongue increases outwardly from the spoiler, said tongue being received in the channel of the electrode body; and

a spring mounted in the channel and biasing the tongue of the spoiler against the walls of the channel so that the spoiler is held in a stationary position with respect to the electrode body.

43. (new) An electrode structure according to claim 42, wherein:
the electrode body further includes a nose portion for energizing the gas mixture, the shoulder portion being positioned on either side of the nose portion.
44. (new) An electrode structure according to claim 42, wherein:
at least a portion of the ceramic spoiler exposed to the gas mixture is shaped to tangentially follow a flow of gas mixture through the discharge chamber.
45. (new) An electrode structure according to claim 42, wherein spring is made of a Copper-Beryllium alloy and covered by a nickel layer.